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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/294,659	04/19/1999	CHANG-SOO PARK	678-259(P873	6375

7590

01/29/2004

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EXAMINER
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LIU, SHUWANG

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 01/29/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/294,659

Applicant(s)

PARK ET AL.

Examiner

Shuwang Liu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 17-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-11, 17, 18, 20 and 21 is/are rejected.
- 7) ☒ Claim(s) 5-8, 19 and 22-25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Request for Continued Examination***

1. The request filed on November 12, 2003, for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/294,659 is acceptable and a RCE has been established. An action on the RCE follows.

### ***Election/Restrictions***

2. This application contains claims 12-16 and 26-28 drawn to an invention nonelected with traverse in Paper No. 8. A complete reply to the final rejection (paper # 12) must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1, 12, 17 and 26 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 2, 9-11, 17, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Nystrom et al. (US 6,189,123).

As shown in figures 5 and 6, Nystrom et al. discloses a receiver for communication system, comprising:

(1) regarding claims 1 and 17:

a message information receiver (116) for receiving information about a message to be received;

a transmission channel receiver (figure 6) for receiving the message;

a controller (116) for determining an iterative decoding number according to the received message information received from the message information receiver (column 13, lines 4-16); and

a decoder (112) for iteratively decoding the received message received from the transmission channel according to the determined iterative decoding number (column 11, lines 17-25, column 12, lines 30-36 and column 13, lines 4-16).

(2) regarding claims 2 and 18:

wherein the message information includes a class of received data (number of bit errors) (column 13, lines 4-16).

(3) regarding claims 9-11:

wherein the decoder is a soft-decision decoder (150) which is a MAP or SOVA (column 2, lines 63-67 and column 13, lines 11-12).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 4, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nystrom et al. in view of Hagenauer et al. (US 6,377,610).

Nystrom et al. et al. discloses all of the subject matter except for specifically teaching of the class including a bit error rate (BER) as recited in claims.

Hagenauer et al., in the same field of endeavor, teaches the relation between BER and iterative decoding number as shown in figure 11. The iterative decoding number increases (from 1 to 5) if the BER is less than a predetermined number.

It would be desirable to enable an existing signal format to be decoded more efficiently and with likelihood of bit errors than is possible with known methods so that by using the controller to determine the relation between BER and iterative decoding

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number. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to using the BER as the class of the receiving data as taught by Hagenauer et al. in the decoder process of Nystrom et al. in order to allow the receiver having more efficiently decoding.

***Allowable Subject Matter***

8. Claims 5-8, 19 and 22-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuwang Liu whose telephone number is (703) 308-9556.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin, can be reached at (703) 305-4714.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

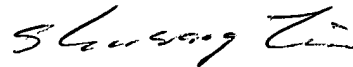
**or faxed to:**

**(703) 872-9306 (for Technology Center 2600 only)**

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Shuwang Liu  
Primary Examiner  
Art Unit 2634

January 23, 2004